

EPODOC / EPO

PN - JP9196176 A 19970729  
 TI - PISTON RING  
 FI - F02F5/00&F ; F16J9/26&D ; C23C4/06 ; C23C4/12  
 PA - NIPPON PISTON RING CO LTD  
 IN - TAKAMURA HIROYUKI; ASAI HIDEHIRO  
 AP - JP19960010371 19960124  
 PR - JP19960010371 19960124  
 DT - I

- WPI / DERWENT

AN - 1997-432925 [40]  
 TI - Piston ring for diesel engines of ships and automobiles -  
 where at least the outer peripheral surface is coated with a  
 combined hot spraying film by a high velocity oxygen flame  
 process

AP - J09196176 In a piston ring, at least the outer peripheral  
 surface is coated with a combined hot spraying film by a high  
 velocity oxygen flame process.

- The combined film consists of an undercoat layer containing  
 20-80 % Cr<sub>3</sub>C<sub>2</sub> and the balance of Ni-Cr, and a top coat layer of  
 Co- or Ni-based sliding surface dispersed with less than 30 wt%  
 Cr<sub>3</sub>C<sub>2</sub>/Ni-Cr hard particles.

- USE - The piston ring is used for diesel engines of ships and  
 automobiles.

- ADVANTAGE - The piston ring has high corrosion resistance and  
 resistance for mate attacking.

- (Dwg.1/8)

IW - PISTON RING DIESEL ENGINE SHIP AUTOMOBILE OUTER PERIPHERAL  
 SURFACE COATING COMBINATION HOT SPRAY FILM HIGH VELOCITY OXYGEN  
 FLAME PROCESS

PN - SE516491 C2 20020122 DW200214 C23C4/06 000pp  
 - JP9196176 A 19970729 DW199740 F16J9/26 005pp  
 - SE9700162 A 19970725 DW199741 C23C4/06 000pp  
 IC - C23C4/06 ; C23C4/12 ; F02F5/00 ; F16J9/26  
 MC - M13-C  
 DC - M13 Q52 Q65  
 PA - (NPIS ) NIPPON PISTON RING CO LTD  
 I - ASAI H; TAKAMURA H  
 AP - SE19970000162 19970121; JP19960010371 19960124; SE19970000162  
 19970121  
 PR - JP19960010371 19960124  
 - PAJ / JPO

PN - JP9196176 A 19970729  
 TI - PISTON RING  
 AB - PROBLEM TO BE SOLVED: To provide a piston ring capable of  
 being used in a marine diesel engine or an automobile diesel  
 engine in which excellent corrosion resistance and mate  
 attackability resistance are required.

- SOLUTION: A composite thermal sprayed coating C consisting of a  
 first layer A as an undercoat having the composition consisting  
 of 20-80% Cr<sub>3</sub>C<sub>2</sub>, and the balance i-Cr, and a second layer B as  
 a top coat having the composition consisting of ≤30wt.% Cr<sub>3</sub>C<sub>2</sub>  
 /Ni-Cr is dispersed as hard particles in the material of a  
 sliding surface of cobalt radial or nickel radial mainly composed  
 of Mo and Cr is formed on a base metal M of at least an outer  
 circumferential sliding surface of a piston ring 10 through the  
 high velocity oxygen flame spraying.

- F16J9/26 ;C23C4/06 ;C23C4/12 ;F02F5/00  
- NIPPON PISTON RING CO LTD  
- TAKAMURA HIROSHI;ASAI HIDEHIRO  
- 19971128  
- 199711  
- JP19960010371 19960124

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